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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,503	07/25/2003	Stephane Bedard	14206/67498	3275
7590 08/30/2005			EXAMINER	
Devine, Millimet & Branch, P.A. 111 Amherst Street P.O. Box 719 Manchester, NH 03105-0719			WILLSE, DAVID H	
			ART UNIT	PAPER NUMBER
			3738	

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/627,503

Applicant(s)

BEDARD, STEPHANE

Examiner

Dave Willse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 25, 2003, is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/19/03; 6/11/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 25-72 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter involving the individual or amputee in combination with the device (MPEP 2105, last paragraph). It is recommended that in claim 25, lines 5 and 6, "being" be replaced by --configured to be-- or the like in order to avoid positively claiming the "individual" as an element of the invention. Similar changes should be made to claim 49, including the preamble: e.g., in claim 49, line 1, --configured to be-- or the like should be inserted after "prosthesis".

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees (*In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969)).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application (37 CFR 1.130(b)).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5, 11-29, 35-53, and 59-72 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 10/600,725. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant limitations are set forth in or are inherent from the claims of the copending application. Regarding claim 1 and others, copending

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claim 7, for example, specifies proprioceptors on both the “non-amputee leg” and the residual limb. Regarding claim 3 and others: copending claim 17. Regarding claim 11 and others: copending claims 6, 7, etc. Regarding claim 17 and others: copending claims 5, 8, 9, and 11. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 11-16, 25-29, 35-40, 49-53, and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath et al., GB 2 302 949 A, which discloses providing a plurality of artificial proprioceptors (page 6, lines 5-11 and 15-23; page 11, lines 1-3 and lines 30-33) and generating control signals in real time for controlling an actuating mechanism in response to data signals at the artificial proprioceptors (Figures 8 and 9; page 7, lines 22-31; etc.). Heath et al. lack explicit mention of providing a proprioceptor on a healthy leg and another on a lower limb prosthesis, but such an arrangement would have been immediately obvious to the ordinary practitioner, who would have been aware of the need for prosthetic leg knee joint control, for example, and would have been motivated by the Heath et al. teaching being applicable to a variety of uses, including “movement analysis of both anatomical or prosthetic limb segments of humans or other animals” (page 6, lines 5-14), with controlling a prosthesis *in combination with* analyzing movement being contemplated (page 6, lines 22-23). Regarding claim 3 and others, official notice is taken that wireless transmission was well known in the art and would have been

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obvious in order to improve comfort to the amputee by reducing or eliminating cumbersome wiring. Regarding claim 4 and others, passive electro-mechanical components such as hydraulic piston-cylinders with controllable fluid resistance were likewise common in the art and would have been obvious in order to impart control of an external prosthetic knee joint so as to improve an amputee's gait. Regarding claims 13, 14, and others, means for measuring velocities and accelerations would have been obvious, if not inherent, from the aforementioned "movement analysis" applications and from the incorporation of a microprocessor for analyzing sensor signals (page 7, lines 27-31).

Claims 1-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sculman et al., US 2002/0198604 A1, which lacks explicit mention of an artificial proprioceptor on a *leg* prosthesis, but such a feature would have been obvious from the invention being directed to artificial *limbs* (e.g., paragraph 0005), from the contemplated use of placing a microsensor 100c in a patient's foot (paragraph 0038), and from sensor means being incorporated within the prosthetic device (paragraph 0046). Generating control signals in real time for controlling a prosthetic actuating mechanism in response to data signals from the proprioceptors is evident from the discussions in paragraphs 0029, 0046, etc., pertaining to microcontrollers, closed control loops, and so on. Regarding claims 2, 3, and others, wiring within and/or between circuitry is involved in effecting wireless communication of the types listed in paragraph 0008. Regarding claims 4, 5, and others, both passive and active electro-mechanical components were quite common in the art at the time of the present invention and would have been immediately obvious from the "actuator/motor means 406 to move mechanical joints or the like (not shown) in the prosthetic device 402" (paragraph 0046), with the ordinary practitioner having been aware,

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for example, of actuators for controlling fluid resistance within a passive piston-cylinder arrangement for the knee of a leg prosthesis. Regarding claims 6-10 and others, sensors of “nerve potential” and “muscle potential” are mentioned in paragraph 0026 and elsewhere. Regarding claims 11-16 and others, kinematic sensors would have been obvious, if not inherent, from the determination of “the amount of body movement” (paragraph 0037) and from the intrinsic need to monitor the effects of the aforementioned actuator/motor means. Regarding claims 17-24 and others, pressure sensors in the metatarsophalangeal and calcaneal regions of a natural or prosthetic foot, for example, were likewise well known in the art and would have been obvious in order to input signals to the microcontroller as to the onset of the swing phase or the weight bearing phase of the gait cycle for either leg and/or in order “to provide sensory data back to the patient” (paragraph 0046, which also expressly mentions *pressure* sensor data).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

DE 42 29 330 A1:

Derwent abstract; third drawing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Willse whose telephone number is 571-272-4762. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott, can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Dave Willse  
Primary Examiner  
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